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Pocket Forward Entry Device (P-FED)
An Interim Solution to TLDHS Block II

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Agenda

- Purpose
- Background
- Requirements
- System Overview
- Acquisition Strategy
- Cost Estimates
- Supported Mission Types
- Messaging Capabilities

Purpose

- Provide a status of the P-FED and a description of material to be fielded
- Present the Fielding Plan
- Present the Training Plan

P-FED Background

- 1QFY01 Contract Awarded
- 2QFY02 Initial User Evaluation
- 1QFY03 Systems Integration Completed
- 3 QFY03 Material Release
- Oct 03 Customer Test Conducted at Ft Sill (Army) (2004-CT-FS-PFEDX-A0772) Army had some problems caused by their ConOps
- Nov 03 Presented to 11th Marines
- Dec 03 Marines conducted same test with 100% success rate
- Dec 03 11th Marines conduct live fire testing/training
- Mar 03 10th Marines conduct live fire testing/training
- Apr 03 CG MARCORSYSCOM ordered P-FED fielded as soon as possible

THDHS Requirements

TLDHS Block II as a system is required to:

- Identify, locate, and designate targets.
- Communicate with Aircraft, AFATDS, and NFCS.
- Transmit requests CAS (to include 9 line briefs), calls for artillery support, and naval surface fires.

Due to funding constraints,some of the TLDHS Block II components are still under development or are not currently meeting Requirements. Because of this the TLDHS as a system is behind schedule for an undetermined duration

An Interim Solution to THDHS Blk II

The Pocket Forward Entry Device (P-FED) software application:

- Software is Government owned and available through the Army PMIE at Ft Monmouth.
- Interfaces with Laser Range Finders currently resident in the Fleet.
- Sending Calls For Fires (CFFs) and all fires related messages to the AFATDS.
- Provides a capability for Observer to transmit Fire Plans.

As an Interim Solution, the P-FED will satisfy the ground fires requirement for automation by employing existing capabilities now.

PFED System Overview

- Pocket Sized Windows CE Systems
  - Hardware Independent
  - C++ Based
  - Lightweight
  - Low Power
- Provide Core Forward Capabilities
- Easy-to-Use, Intuitive Graphic User Interface (GUI)
- Interoperates with AFATDS

System Overview (Cont)

- Compatible with the Following Equipment:
  - SINCGARS SIP and ASIP:
  - PLGR
  - MELIOS MK-7 LASER Ranging Binos
  - Leica Vector 4 LASER Ranging Binos

- Uses Standard Two-Way Communications and Messaging:
  - MIL STD 188-220
  - Army VMF/Joint VMF
  - Sensor Link Protocol (SLP)
  - TACFIRE FSK/NRZ
  - Bluetooth (wireless)

Pocket sized Forward Entry Device
P-FED

Equipment

Ruggedized PDA
Internal TACLINK Modem
External AA Battery Pack
Serial Interface to CLRF
Serial Interface to GPS-PLGR

Capabilities

Digitally request/coordinate fire missions

Provide combat information and receive orders and information

One data port for CNR communication

PFED What it is and isn't

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IS

- Entry Device to AFATDS for Artillery Fire Support
- Light Weight
- Touch Screen Driven
- Simulation mission capable
- Ready to go
- Interim Solution

**Acceptance of particular interim capabilities will be the result of a Cost-as-an-Independent-Variable (CAIV) and user jury conducted between the materiel developer, combat developer, and the Advocate.* – O&O Change 5

Isn't

- Multi-role (CAS Device)
- Graphic Enabled
  - No Battlefield Geometries
  - No MAP support
- BFSA Tool
- TLDHS Block III

The Artillery OAG has requested the PFED as soon as possible.

DCM Aviation and PPO have agreed upon the PFED as an interim device which will not have a negative impact on the THS(X) development.

TED Acquisition Strategy

- Utilize applicable parts of the TLDHS ORD, O&O as requirements documents. (Artillery component)
- Establish MOA w/USA PM IE
- Establish Abbreviated Acquisition Program
- Leverage all testing performed by USA, ATEC
- Procure equipment (~$2M)
- Utilize TLDHS documents to provide logistics, S&E support.
- Utilize TLDHS funds to procure and life-cycle maintenance.
- Utilize NSWC, Crane as integration agent, life-cycle logistics manager.
- Fielding PFED device to Artillery Forward Observers while finalizing the TLDHS Block III full up capabilities.

Acquisition Strategy

- Buy a Common hardware platform:
  - A platform that will support other applications I/E, D-DACT, Light Weight Tech FD, BUC-R etc.
  - Allows for a discount for buying in volume
  - Pay for a support package for one system vice many

- <u>Evolutionary Acquisition</u>.
  - Buy what is affordable and required
  - Buy peripheral equipment (accessories) as required
  - As technology advance and funds become available

Acquisition Strategy, Block II

Vector 21B

R-PDA

AN/PRC-119 (SINCGARS)

Laser Designator

= Artillery

Pocket sized Forward Entry Device
P-FED

PLANNED ALLOWANCES AND NUMBERS TO BE FIELDED

UNIT DESCRIPTION	
155MMBTRY, ARTYBN, ARTYREGT, 1ST MARDIV	36
155MMBTRY, ARTYBN, ARTYREGT, 2D MARDIV	36
155MMBTRY, ARTYBN, ARTYREGT, 3D MARDIV(HI)	6
155MMBTRY, ARTYBN, ARTYREGT, 3D MARDIV	12
155MMBTRY, ARTYBN, ARTYREGT, 4TH MARDIV	27
MAD, EXPEDITIONARY WARFARE TRNG GRP, LANT	2
MAD, EXPEDITIONARY WARFARE TRNG GRP, PAC	6
MARCOR ADMIN DET, ARTY SCHOOL. FT SILL, OK	12
DMFA/WRMR, MCLB, ALBANY, GA	14
Total	151

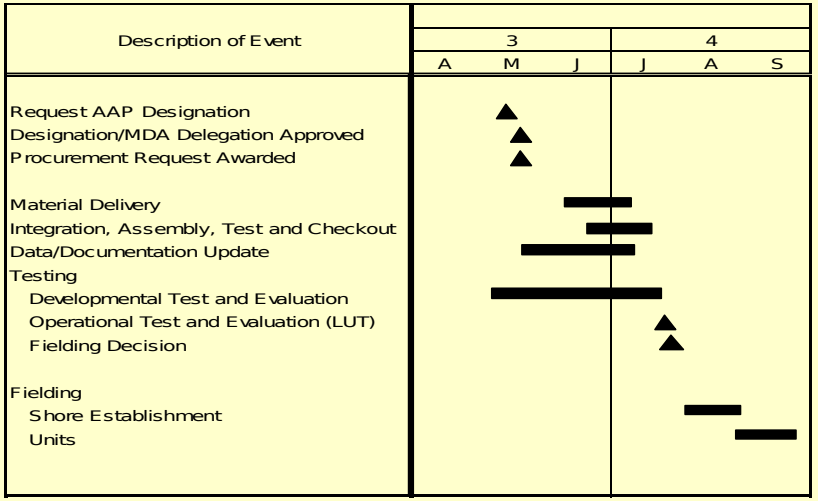
Capability

The PFED system is a Command, Control, and Communications (C3) field artillery system used by Forward Observers (FO) to communicate with the fire support digital network. It allows the FO to call for and control indirect fires, and send/receive reports and status updates.

Weight: 2.5 lbs (RPDA)

Power requirements: BB2600 or commercial AA

Schedule



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$$$ UNIT COST ESTIMATES $$$

- Tacter R-PDA with dual PCMCIA Reader (R1) and 3 year Warranty $3

- Tacter R-PDA Protective Cover R1 $
- Tacter R-PDA Night Vision Goggle (NVG) Filter $ 2
- Tacter R-PDA External Battery Adapter and 3 year Warranty $
- Tacter R-PDA AC/DC Power Adapter $ 1
- Tacter R-PDA Dome Assy-Incl: Dome Dual Slot w/2 holes, Dual Serial PCMCIA w/Dome conn & Taclink 3000 Dongles card w/dome conn w/3 year warranty $27
- SAASM GPS $2
- Associated Cables $

Total $1

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$$$$ TOTAL COST ESTIMATES $$ $$

Description	Estimate Cost
Hardware	$1,809,400
Integration, Assembly, Test and Checkout	$76,000
Interface Analysis	$50,000
System of Systems Test Support (MCTSSA)	n/a
Data/Documentation Government	$75,000
Training of NETT (Travel)	$30,000
Initial Spares and Repair Parts	$120,000
ICE2 (CLS)	$225,000
Total	$2,385,400

Supported Mission Types

- TLDHS Supported Missions
  - Registration
  - FFE/Adjust Fire
  - Joint Tactical Air Request
  - Immediate Suppression/Smoke
  - SEAD
  - Copperhead Priority Target
  - FPF
  - FASCAM
  - Check Fire
- PFED Supported Missions
  - FFE/Adjust Fire
  - Immediate Mission
  - Smoke Mission
  - FPF
  - Check Fire

Message Capabilities for PFED

The P-FED Supports the Following:

- Free Text Messages
- Calls For Fire

  All standard methods of Target Locatio
- MedEvac
- OBCO
- SALUTE Report
- Shell Report
- Unit Re-supply
- Unit Status

TLDHS Message for FFE/Adjust

- All message to complete FFE Mission are implemented
- The P-FED software also supports these message sets

QUESTIONS ??